Name:_____ HW94_SSS

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Geometry, Period_____

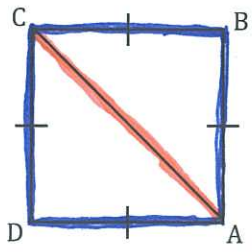
Due Date: Wed, 4 Feb 2015

Geometry Homework

Form A

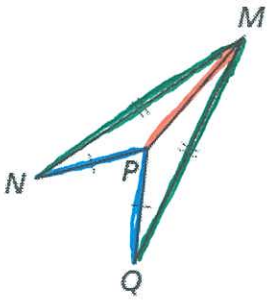
Prove that the two triangles are congruent using a 2-column proof. Color-code corresponding sides.

1. $\triangle ABC \cong \triangle CDA$



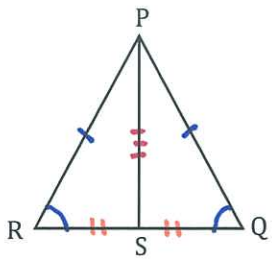
Statement	Reason
1. $\overline{AB} \cong \overline{CD}$	1. given
2. $\overline{BC} \cong \overline{DA}$	2.
3. $\overline{CA} \cong \overline{AC}$	3.
4. $\triangle ABC \cong \triangle CDA$	4.

2. $\triangle MNP \cong \triangle MQP$



Statement	Reason
1. $\overline{MN} \cong$	1.
2.	2.
3.	3. same line (reflexive property)
4.	4.

3. Given: $\triangle RPQ$ is an isosceles triangle with vertex P, and line segment PS bisects line segment RQ. $\triangle RPS \cong$ which triangle? Prove it.



Statement	Reason
1.	1. isosceles triangles have...
2.	2. a bisector...
3.	3.
4.	4.

4. Answer the following based on the congruence you proved in #3. SHOW YOUR WORK (always!)

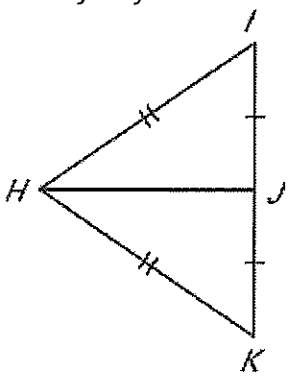
4a) $\overline{RP} \cong$ _____

4b) If $m\angle R = 55°$, then $m\angle RPS =$ _____

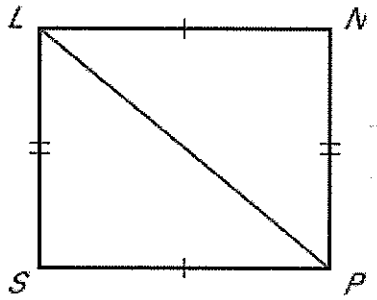
4c) If the base of triangle PQR is 6 feet and the height is 4 feet, what is the perimeter?

For #5 & 6, decide whether the congruence statement is true or false. If it is false, fix the statement and *explain* your reasoning in complete sentences. If it is true, color code the congruent parts to demonstrate.

5. $\Delta IHJ \cong \Delta JHK$



6. $\Delta LPS \cong \Delta PLN$



Determine the measure of the angles below. YOU MUST SHOW YOUR WORK! State the postulate /theorem /property you used to find the angles. For example, vertical angles. **SHOW** the math below, and label all parts!

7. $s =$ _____

8. $m =$ _____

9. $m\angle P =$ _____